VASCULAR FLORA OF CEDAR GAP LAKE AND ENVIRONS, WEBSTER AND WRIGHT COUNTIES, MISSOURI

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ABSTRACT

The vascular flora of Cedar Gap Lake and environs in the Oak-Hickory Forest Region of southern Missouri are the focus of this study. An annotated list of 504 taxa from 87 families are recorded from Cedar Gap, the second most elevated point, 1694 feet, of the unglaciated, dissected Ozark Plateaus Province of the Interior Highlands. Twenty-one percent of the taxa are nonindigenous plants. One hundred twenty-six Webster County and 134 Wright County distributional records are documented.

The Oak-Hickory Association, the principal upland forest type in Missouri, is most extensive and highly developed in the unglaciated Ozarks Region (Braun, 1950). This association appears to have originated when the increased aridity of the Western Interior eliminated more mesic species of the Mixed Tertiary Forest from the western region of the Eastern Deciduous Forest Formation (Braun, 1955). The most elevated portion of the highly eroded Ozark Uplift in the Ozark Plateaus Province of the Interior Highlands is situated within the boundaries of Webster County and Wright County in southern Missouri (Steyermark, 1959). Fenneman (1938) stated. "Aside from the Boston Mountains the domed Ozark Plateau reaches its highest level near its center . . . at Cedar Gap where the upland surface is almost 1700 feet . . . in Wright County, Missouri." Stevermark (1963) reported Webster and Wright Counties as being among the least worked counties in documentation of vascular plants of the Missouri Ozarks. The purpose of this study is to present the first descriptive account of the vascular flora from an unique upland area within these counties, Cedar Gap Lake and vicinity.

A floristic study of this area was conducted semimonthly from June, 1974, through July, 1976. Four plant community types were recognized: A disturbed tall grass prairie strip restricted to the St. Louis-San Francisco Raifroad right-of-way; a wet sedge-grass meadow around Cedar Gap Lake; a small oak-hickory woodland adjacent to the lake; and a waste ground community of general open disturbed habitats without any permanent structure.

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The 300 acre study site is located in the SW $\frac{1}{4}$ S $\frac{1}{2}$ Section 15 and the NW $\frac{1}{4}$ N $\frac{1}{2}$ N $\frac{1}{2}$ Section 22 of Wright County, and the SW $\frac{1}{4}$ Section 16 of Webster County, T28N, R16W, of the Cedar Gap Quadrangle (Figure 1).

The topography consists of gently rolling to moderately sloping uplands with a mean gradient of two to twelve percent. The elevated, dissected Ozark Dome forms a part of the main dividing ridge between the tributaries of the Missouri River to the north and those of the White River to the south. This dividing ridge may be traced from the western limit of Webster County along the main line of the St. Louis-San Francisco Railroad. The bedrock is composed of resistant cherty, crinoidal limestones belonging to the Burlington-Keokuk Formations of the Osagean Series of the Mississippian System (McCracken, et al., 1961). Two small limestone sink-hole depressions within the study area are a feature of Karst topography.

The representative forest soil series, Wilderness Cherty Silt Loams, consist of moderately well-drained soils with cherty fragipans from nineteen to thirty-one inches in depth. Acid soil pH reactions range from 6.0 to 4.5. The surface layers are medium acid, brown, cherty silty loams and the subsoils are strongly acid, dark brown, cherty silty loams. The fragipans are pale brown, cherty silty loams overlying strong brown, cherty silty clays. The layers beneath the fragipans are very strongly acid, red to yellowish-red,

cherty silty clays (USDA, Soil Conservation Service, 1975).

The continental climate in southern Missouri consists of wide seasonal variations in weather with typically hot, humid summers and cold winters. The mean annual temperature is 57.2° F. with mean temperatures of 31.4° F. during January and 78.6° F. through July. Total annual precipitation approximates 41.38 inches. The mean minimum precipitation of 1.96 inches occurs in January and the maximum precipitation of 5.28 inches falls in May. The mean growing season is 192 days with the first and last freeze occurring around October 23 and April 14 (McQuigg, 1969).

A tall grass prairie strip was sampled along a two-mile stretch of the St. Louis-San Francisco Railroad extending through Webster and Wright Counties. Several perennial prairie grasses and forbs, many weedy invaders, and a few woody members characterize this disturbed right-of-way situation. Local colonies of pioneer woody plants along fence row thickets have developed into the Sassafras-Rhus-Diospyros Associes of Steyermark (1940). In terms of species, most belong to the Compositae, Gramineae, Leguminosae, Rosaceae, Euphorbiaceae, and Asclepiadiaceae. Native perennial grasses include Andropogon gerardii, A. virginicus, Schizachyrium scoparium, Elymus canadensis, Sorgbastrum avenaceum, Tridens flavus, Eragrostis spectabilis, Koeleria pyranidata, and Panicum oligosanthes var. scribnerianum.

Cedar Gap Lake, a 43.7 acre body of water, was created when the main line of the St. Louis-San Francisco Railroad was built in 1870. This eutrophic lake aburs the railway embankment and lies on the boundary line between Webster County and Wright County. Cedar Gap Lake formerly served as a

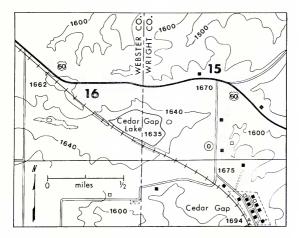


Figure 1. Cedar Gap Lake and environs along the St. Louis-San Francisco Railroad. Adapted from the Cedar Gap Quadrangle, Missouri, 7.5-minute series, USGS, 1951.

reservoir for steam locomotives from 1923 until 1951.

Vegetational zones around Cedar Gap Lake reveal generalized stages of hydrosere succession. Dominant emergent species are notably scarce except for extensive colonies of Nelumbo lutea, Persicaria coccinea, and Potamogeton diversifolius. Amphibious members along the muddy lake margin include clumps of Alisma plantago-aquatica, Sagittaria latifolia, Typha latifolia, and several species of Carex, Eleocharis, Scirpus, and Juncus. Common shrubs around the lake border are Salix nigra, S. caroliniana, and Cephalanthus occidentalis.

The extensive wet sedge-grass meadow surrounding Cedar Gap Lake is dominated by members of the Cyperaceae, Gramineae, and Juncaceae. Common sedges include Carex Inpulina, C. Iurida, C. frankii, C. scoparia, C. vulpinoidea, Dulichium arundinaceum, Eleocharis quadrangulata, and Fimbristylis autumnalis. Principal lowland prairie grasses interspersed throughout this wetland zone are Spartina pectinata, Panicum virgatum, P. rigidulum, Pbalaris arundinacea, Leersia oryzoides, Cinna arundinacea, Glyceria striata, Elymus virginicus, Agrostis stolonifera, and Tripsacum dactyloides. Frequent

rushes consist of Juncus interior, J. acuminatus, J. tenuis, and J. brachycarpus. Common taxa of dense thickets include Hibiscus lasiocarpos, Ribes missouriense, Polygonum scandens, Rubus pensylvanicus, Apios americana, Sambucus canadensis, and Rhus radicans. Pastures, cultivated fields, and an oak-hickory woodland border the sedge-grass meadow zone.

The oak-hickory woodland at the eastern border of the lake adjacent to the railroad right-of-way has been derived from old pastures and orchards abandoned since 1905. Distinctive old field species, such as Juniperus virginiana, Rhus aromatica, Andropogon virginicus, and Danthonia spicata, are intermixed throughout the woodland. Important high understory and subcanopy species include Sassafras albidum, Rhus copallina, R. glabra, Diospyros virginiana, Gleditsia triacanthos, Cornus Ilorida, Amelanchier arborea, Ulmus rubra, and Viburnum rufidulum. Major canopy trees are Quercus stellata, Q. marilandica, Q. alba, Q. velutina, Carya tomentosa, C. orata, C. texana, Prunus serotina, Nyssa sylvatica, and Celtis occidentalis. A few fruit trees, Pyrus malus and Prunus persica, persist as orchard remnants.

According to Steyermark (1940), this subclimax forest type may be classified under the *Quercus marilandica-Quercus stellata* Associes converging through secondary succession into the probable climax forest type of more shade tolerant oaks and hickories, the *Quercus alba-Quercus velutina-Carya* Association. Steyermark (1959) described the Oak-Hickory Association as the most complex edaphic association in the Ozarks Region.

The waste ground community is rich in species composition, but it lacks the structural organization found in the older, more stabilized communities. Several open situations include pastures, fence row borders, cultivated fields, a fragipan road from the lake, highway roadsides along the right-of-way, and railroad track ballast. These disturbed habitats are normally colonized by a high number of ubiquitous native and nonindigenous weeds.

Voucher specimens are on deposit in the Herbarium of Southern Illinois University (SIU) for documentation of the annotated list of vascular plants. Duplicate sets of specimens for most species have been placed in the Herbaria of Northeast Louisiana University (NLU) and Southwest Missouri State University (SMS). Identification and nomenclature for all taxa follow Steyermark (1963), except for several more recent taxonomic changes presented by Correll and Johnston (1970). County voucher records are derived from county distribution maps found in the Flora of Missouri (Steyermark, 1963).

The annotated list is arranged alphabetically by family, genus, and species. Frequency of occurrence for each taxon is based upon field observations and field collections. This abundance scale had typical progression values of common, frequent, infrequent, and rare. An asterisk (*) before a taxon represents a new Webster County voucher, and a double asterisk (**) represents a new Wright County voucher. A triple asterisk (***) before a taxon indicates documentation with new representative voucher records for

both Webster and Wright Counties. Naturalized and introduced nonindigenous plant classifications follow the definitions of Lawrence (1951, p. 279). These appear after the community category and are represented by N or I, respectively.

The annotated list is comprised of 87 families, 295 genera, and 504 specific and subspecific taxa from Cedar Gap Lake and environs. One gymnosperm, three pteridophytes, 133 monocots, and 367 dicots are represented. The five largest families are: Compositae 67, Gramineae 66, Leguminosae 39, Cyperaceae 34, and Rosaceae 22. One hundred-seven taxa (21%) are nonindigenous plants. One hundred twenty-six Webster County and 134 Wright County distributional records are documented. The total species number, 504, constitutes fifteen percent of the vascular flora of Missouri based on Stevermark (1963).

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ANNOTATED LIST OF VASCULAR PLANTS

ACANTHACEAE

Ruellia humilis Nutt. Wild Petunia. Infrequent, railroad prairie strip.

ACERACEAE

Acer saccharinum L. Silver Maple. Rare, margin of Cedar Gap Lake.

AIZOACEAE

**Mollugo verticillata L. Carpetweed. Infrequent, waste ground areas, N.

ALISMATACEAE

Alisma plantago-aquatica L. Water Plantain. Frequent, lake margin.

** Sagittaria latifolia Willd. Arrowhead. Frequent, lake margin; sink-hole pond.

AMARANTHACEAE

- *** Amaranthus hybridus L. Green Amaranth. Common, waste ground of railroad. N.
- ***Froelichia gracilis (Hook.) Moq. Cottonweed. Common, railroad track ballast.

AMARYLLIDACEAE

Hypoxis hirsuta (L.) Coville. Yellow Stargrass. Frequent, railroad prairie.

ANACARDIACEAE

Rhus aromatica Ait. Fragrant Sumac. Common, open woodland; fence rows. Rhus copallina L. Dwarf Sumac. Common, edge of woods; fence row borders. Rhus glabra L. Smooth Sumac. Common, woodland borders; fence row thickets. Rhus radicans L. Poison Ivy. Common, oak woods; sedge thickets; fence rows.

APOCYNACEAE

*Apocynum cannabinum L. Indian Hemp. Common, railroad prairie strip.

ARACEAE

Acorus calamus L. Sweet Flag. Frequent, lake spillway; sink-hole pond. N.

ASCLEPIADACEAE

- **Asclepias biriella (Pennell) Woodson. Green Milkweed. Frequent, prairie strip.
 *Asclepias incarnata L. Swamp Milkweed. Infrequent, wet sedge-grass meadow.
- **Asclepias purpurascens L. Purple Milkweed. Infrequent, open prairie strip.
 ***Asclepias syriaca L. Common Milkweed. Common, railroad prairie strip.
- Asclepias syriada L. Colimon Minkweda. Continon, raintoa pitalire surp. Asclepias tuberoia L. var. interior (Woodson) Shinners. Butterfly Weed. Frequent, railroad prairie strip; roadsides.
 Asclepias verticiilada L. Horsctail Milkweed. Rare, railroad prairie strip.

BALSAMINACEAE

Impatiens capensis Meerb. Spotted Touch-me-not. Frequent, lake border.

BERBERIDACEAE

Podophyllum peltatum L. May Apple. Common, oak woodland; moist thickets.

BETULACEAE

Corylus americana Walt. Hazelnut. Frequent, fence rows; woodland edges.

BIGNONIACEAE

**Campsis radicans (L.) Seem. Trumpet Creeper. Rare, mesic lake thickets.

BORAGINACEAE

Hackelia virginiana (L.) I. M. Johnston. Stickseed. Rare, prairie swale.

*Lithospermum arvense L. Corn Cromwell. Frequent, waste ground areas. N. Lithospermum canescens (Michx.) Lehm. Hoary Puccoon. Common, prairie strip.

* * * Myosotis virginica (L.) BSP. Scorpion Grass. Infrequent, cultivated fields.

CALLITRICHACEAE

Callitriche heterophylla Pursh. Water Starwort. Rare, spillway overflow. Callitriche terrestris Raf. Terrestial Starwort. Rare, prairie strip.

CAMPANULACEAE

Campanula americana L. Tall Bellflower. Rare, wet sedge-grass meadow. Lobelia spicata Lam. Palespike Lobelia. Infrequent, railroad prairie. Triodamis biflora (R. & P.) Greene. Venus' Looking Glass. Rare, prairie strip. Triodamis perfoliata (L.) Nieuw, Venus' Looking Glass. Comming, prairie strip.

CAPPARIDACEAE

***Polanisia dodecandra (L.) DC. Clammyweed. Frequent, railroad ballast.

CAPRIFOLIACEAE

Sambueus canadensis L. Elderbetry. Common, sedge meadow; lake margin. Symphoricarpos orbiculatus Moench. Coralbetry. Common, fence rows; woods.

Triosteum angustifolium L. Yellow Horse Gentian. Infrequent, shaded woods. Viburnum rufidulum Raf. Southern Black Haw. Frequent, oak woodland.

CARYOPHYLLACEAE

*Cerastium glomeratum Thuill. Mouse-ear Chickweed. Common, waste ground. N. *Cerastium vulgatum L. Mouse-ear Chickweed. Common, waste ground areas. N.

***Dianthus armeria L. Deptford Pink. Frequent, roadsides; disturbed ground. N.

**Saponaria officinalis L. Bouncing Bet. Rare, railroad track ballast. N. Silene antirrbina L. Sleepy Cartchly. Frequent, railroad prairie; roadsides. Silene stellata (L.) Ait. Starry Campion. Rare, moist shaded woodland. Silene virginica L. Fire Pink. Rare, cherty oak woodland.

*Stellaria media (L.) Cyrillo. Common Chickweed. Common, waste ground. N.

CELASTRACEAE

Celastrus scandens L. American Bittersweet. Rate, oak woodland thicket.

CHENOPODIACEAE

***Chenopodium album L. Lamb's Quarter. Common, open waste ground. N.

CISTACEAE

Lechea tenuifolia Michx. Pinweed. Infrequent, railroad prairie strip.

COMMELINACEAE

****Commelina communis L. Dayflower. Infrequent, railtoad track ballast. I.

Commelina eretet L. var. angustifolia (Michx.) Fern. Hierba del Pollo. Infrequent, lake border by old pumping station.

Tradescantia obiensis Raf. Spiderwort. Common, railroad track ballast.

COMPOSITAE

*Achillea millefolium L. Yatrow. Common, railroad prairie; pastures. N. Ambrosia artemisiifolia L. Common Ragweed. Common, waste ground areas. Ambrosia bidentata Michx. Lance-leaf Ragweed. Common, open waste ground. Ambrosia trifida L. Giant Ragweed. Common, lake border; moist ditches. Antennaria plantaginifolia (L.) Hook. Pussy's Toes. Frequent, open woods. *Anthemis cotula L. Maweed. Infrequent, railroad ballast; roadsides. N.

** Arctium minus (Hill) Bernh. Burdock. Rare, cultivated field edges. N. Aster oblongifolius Nutt. var. angustatus Shinners. Aromatic Aster. Infrequent, oakhickory woodland; fence rows.

Aster patens Ait. Spreading Aster. Frequent, oak-hickory woodland.

Aster pilosus Willd, var. demotus Blake. White Heath Aster. Common, railroad

prairie strip; pastures; roadsides.
** Aster traealtus Poir, Willow Aster, Rare, railroad right-of-way.

*Aster ptarmicoides (Nees) T. & G. White Upland Aster. Rare, prairie strip.

*Bidens bipinnata L. Spanish Needles. Frequent, disturbed open areas.

**Bidens frondosa L. Sticktights. Infrequent, wet sedge-grass meadow.
**Bidens polylepis Blake. Tickseed Sunflower. Common, lake margin; sedge meadow.

Carduus nutans L. Musk Thistle. Infrequent, tailroad prairie; pastures. N. Centaurea maculosa Lam. Star Thistle. Infrequent, railroad track ballast. N. Chrysanthemum leucanthemum L. Ox-eye Daisy. Frequent, prairie strip; pastures. N.

Cichorium intybus L. Chicory. Frequent, roadsides; right-of-way strip. N.

*Girsium altissimum (L.) Spreng. Tall Thistle. Infrequent, pasture fields.

Grissium vulgare (Savi) Tenore. Bull Thistle. Frequent, waste ground areas. N.

Goreopsis palmata Nutt. Prairie Coreopsis. Frequent, railroad prairie.

- Echinaeva pallida Nutt. Pale Coneflower. Infrequent, railroad prairie. Erigeron annaus (L.) Pers. Daisy Fleabane. Common, waste ground areas. Erigeron canadensis L. Horseweed. Common, open disurbed habitats. Erigeron pulchellus Michx. Robin's Plantain. Infrequent, cherty woodland. Erigeron strigonus Mulh. Whitetop. Common, roadsides; pastures.
- ** Eupatorium perfoliatum L. Throughout. Rare, wet sedge-grass meadow.
- **Eupatorium serotinum Michx. Late Boneset. Frequent, sedge-grass meadow. Gnaphalium obtusifolium L. Sweet Everlasting. Frequent, prairie strip.
- *Gnatphalium purpureum L. Purple Cudweed. Infrequent, open oak woodland. *Heleastrum hemisphærieum (Air.) Shinners. Heleastrum. Rare, prairie strip. Helenium flexuosum Raf. Purple-headed Sneezeweed. Common, prairie swales.
- **Helianthus annuus L. Common Sunflower. Rare, railroad track ballast. I. Helianthus grossesertatus Martens. Sawtooth Sunflower. Rare, lake margin. Helianthus birstutus Raf. Bristly Sunflower. Common, prairie strin: fieldie strin.
 - Helianthus mollis Lam. Ashy Sunflower. Common, railroad prairie strip.
- **Heliopsis helianthoides (L.) Sweet. Ox-eye. Infrequent, railroad prairie.
 *Heterotheca pilosa (Nutt.) Shinners. Golden Aster. Rare, roadsides.
- ** Iva annua L. Marsh Elder. Rare, lake border by railroad tracks.
- *Krigia biflora (Walt.) Blake. False Dandelion. Rare, cherty moist woods. *Krigia oppositifolia Raf. Dwarf Dandelion. Rare, spillway border.
- ** Kuhnia enpatorioides L. False Boneset. Infrequent, railroad prairie strip.
- ** * Lactuca canadensis L. Wild Lettuce. Common, open waste ground.
- ***Lactuca serriola I. Prickly Lettuce. Common, disturbed open habitats. N. Liatris aspera Michx. Rough Blazing Star. Infrequent, prairie strip. Liatris pyenostacbya Michx. Prairie Blazing Star. Infrequent, prairie strip. Parthenium bispidum Raf. American Feverfew. Common, railroad prairie strip. Prenauthes aspera Michx. Rough White Letruce. Rare, railroad prairie: Pyrrhopappus carolinianus (Walt.) DC. False Dandelion. Frequent, roadsides. Ratibida primata (Vent.) Barnh. Gray-headed Conellower. Rare, prairie strip. *Radbeckia birta L. Black-eyed Susan. Common, right-of-way; pastures.
 - *Rüdbeckia brīta L. Black-eyed Susan. Common, right-of-way; pastures. Rüdbeckia triloba L. Brown-eyed Susan. Infrequent, oak woodland borders. Silbilium integrifolium Michx. Rosinweed. Intrequent, right-of-way thickets. Solidago canadensis L. Tall Goldenrod. Common, pastures; prairie strip. Solidago missouriensi: Nutr. Missouri Goldenrod. Common, prairie strip: Solidago nemoralis Ait. Old-field Goldenrod. Common, prairie strip: pastures. *Solidago peirolaris Ait. Goldenrod. Infrequent, field edges; woodland.
 - Solidago periorari Art, Goldenrod, Infrequent, nela edges; Woodland. Solidago rigida L. Sriff Goldenrod. Rare, railroad prairie strip. Solidago ulmijolia Muhl. Elm-leaf Goldenrod. Infrequent, fence rows.
- ***Travacum officinale Wiggers. Dandelion. Common, pastures; prairie strip. N. **Tragopogon dubius Soop. Goat's Beard. Infrequent, roadsides; track ballast. N. *Verbesina heliauthoides Michx. Yellow Crownbread. Infrequent, field edge. Vernonia arkansana DC. Fringed Ironweed. Infrequent, woodland thickets. Vernonia baldwinii Tort Western Ironweed. Frequent, right-of-way.
- **Vernonia missurica Raf. Missouri Ironweed. Common, prairie strip; fields. Xanthium strumarium L. Cocklebur. Infrequent, cultivated field edges.

CONVOLVULACEAE

- ***Calystegia sepium (L.) R. Br. Hedge Bindweed. Infrequent, railroad thickets.
 **Convolvulus arvensis L. Field Bindweed. Frequent, waste ground sites. N.
- Cuscuta gentagona Engelm. Dodder. Rare, prairie swale border on Solidago spp.
 Cuscuta pentagona Engelm. Dodder. Rare, prairie swale border.
- ****Cuscusa polygonorum Engelm. Smartweed Dodder. Frequent, lake margin; wet sedge-grass meadow on Polygonum spp.

- *Ipomoea hederacea (L.) Jacq. Ivy-leaved Morning Glory. Infrequent, waste ground habitats. N.
- Ipomoea lacunosa L. Small White Morning Glory. Rare, pasture fence row.
- *Ipomoea pandurata (L.) G.F.W. Meyer. Wild Potato. Infrequent, field edges.
 **Ipomoea purpurea (L.) Roth. Common Morning Glory. Rare, railway ballast. I.

CORNACEAE

Cornus florida L. Flowering Dogwood. Frequent, subcanopy of oak woods.

CRUCIFERAE

Barbarea vulgaris R. Br. var. arcuata (Opiz) Fries. Yellow Rocket. Common, pasture fields; roadsides; right-of-way. N.

**Brassica juncea (L.) Coss, Indian Mustard. Infrequent, waste ground. N.

**Brassica kaber (DC.) L.C. Wheeler var. pinnatifida (Stokes) L.C. Wheeler. Charlock. Infrequent, railroad ballast. N.

**Capsella bursa-pastoris L. Shepherd's Purse. Infrequent, waste ground. N.

**Cardamine partiflora L. var. arenicola (Britt.) O.E. Schultz. Bittercress. Frequent, disturbed open ground; cultivated fields.

Dentaria laciniata Muhl. Toothwort. Frequent, open cherty oak woodland.

**Descurainea pinnata (Walt.) Britt. var. brachycarpa (Richards) Fern. Tansy Mustard. Infrequent, railroad prairie strip.

*Draba verna L. Vernal Whitlow Grass. Rare, roadside; railway ballast. N.

**Lepidium campestre (L.) R. Br. Fieldcress. Rare, waste ground by tracks. N. Lepidium virginicum L. Peppergrass. Infrequent, pastures; right-of-way. Sisymbrium officinale (L.) Scop. Hedge Mustard. Infrequent, railroad ballast. N.

***Thlaspi arvense L. Field Pennycress. Frequent, roadsides; railroad ballast. N. *Thlaspi perfoliatum L. Perfoliate Pennycress. Rare, waste ground. N.

CUPRESSACEAE

Juniperus virginiana L. Red Cedar. Common, oak woods; pastures; fence rows.

CYPERACEAE

- **Carex annectans Bickn. Scdge. Frequent, moist ditches; sedge-grass meadow.
- **Carex artitecta Mackenz. Emmon's Sedge. Rare, cherty open woods.
- **Carex bicknellii Britt. Bicknell's Sedge. Infrequent, woodland border.

 *Carex bushii Mackenz. Bush's Sedge. Frequent, railroad prairie strip.
 - Carex cephalophora Muhl. Oval-headed Sedge. Rare, prairie swale.
- **Carex crinita Lam. Fringed Sedge. Infrequent, wer sedge-grass meadow.

 Carex digitalis Willd. Sedge. Rare, oak-hickory shaded woods.

 Carex the abit New French's Sedge. Compon lake margin; sedge meado.

Carex frankii Kunth. Frank's Sedge. Common, lake margin; sedge meadow. Carex gravida Bailey. Heavy Sedge. Rare, wetland sedge-grass meadow.

Carex birsutella Mackenz. Hirsute Sedge. Infrequent, shaded oak woodland.
***Carex lupulina Muhl. Hop Sedge. Common, wet sedge-grass meadow.

***Carex lupulina Muhl. Hop Sedge. Common, wet sedge-grass meadow. Carex lurida Wahlenb. Sedge. Common, lake margin; sedge-grass meadow. Carex meadii Dewey. Sedge. Common, railroad prairie strip.

Carex molesta Mackenz, Sedge. Rare, roadside ditch along right-of-way.
Carex mublembergii Schk. Muhlenberg's Sedge. Rare, prairie swale by lake.
Carex stopparia Schk. Pointed Broomsedge. Common, sedge-grass meadow.

***Carex squarrosa L. Squarrose Sedge. Frequent, sedge-grass meadow.

**Carex idiatroia 1. Squartose seege. Trequent, sucge-gass inkauore.

**Carex tribuloides Wahlenb. Blunt Broomsedge. Frequent, sedge-grass meadow.

*Carex vulpinoidea Michx. Fox Sedge. Common, lake margin; sedge meadow.

**Cyperus erythrorbizos Muhl. Red-rooted Sedge. Infrequent, lake margin.

Cyperus esculentus L. Yellow Nutgrass. Infrequent, cultivated field edges.

Cyperus ovularis (Michx.) Torr. Hedgehog Clubrush. Frequent, prairie strip.

- *Cyperus pseudovegetus Steud. Umbrella Sedge. Rare, wet sedge-grass meadow.

 Cyperus strigosus L. Flatsedge. Common, lake margin; sink-hole pond border.
- **Dulichlum arundinaceum (L.) Britt. Three-way Sedge. Common, lake margins. Eleocharis acicularis (L.) R. & S. Wire Spikerush. Common, muddy lake margin.
- *** Eleocharis obtusa (Willd.) Schultes. Common Spikerush. Common, lake margin.
- * * * Eleocharis smallii Britt. Small's Spikerush. Common, sink-hole border.
 - **Eleocharis quadrangulata (Michx.) R. & S. Square-stemmed Spikerush. Common, muddy lake margin; sink-hole border.
 - *Eleocharis tenuis (Willd.) Schultes. var. verrucosa (Svenson) Svenson. Slender Spikerush. Frequent, lake margin; prairie swales.
 - Fimbristylis autumnalis (L.) R. & S. Autumn Sedge. Common, sedge meadow.
- *Scirpus atrovirens Willd. Common Bulrush. Infrequent, wet sedge meadow.
- ***Scirpus pendulus Muhl. Bulrush. Common, roadside ditches; sedge meadow.
- **Scirpus validus Vahl, var. creber Fern. Great Bulrush. Frequent, lake spillway overflow; sink-hole pond margin.

DIOSCOREACEAE

Dioscorea villosa L. Wild Yam. Infrequent, shady oak-hickory woodland.

DIPSACACEAE

Dipsaeus sylvestris Huds. Common Teasel. Infrequent, waste ground. N. EBENACEAE

Diospyros virginiana L. Persimmon. Common, subcanopy of oak woods; fields.

EUPHORBIACEAE

Acalypha gracileus Gray. Three-seeded Mercury. Rare, railway ballast. Acalypha virginica L. Three-seeded Mercury. Common, right-of-way area. Croton capitatus Michx. Hogwort. Rare, waste ground of right-of-way.

**Croton glandulosa L. var. septentrionalis Muell.-Arg. Sand Croton. Infrequent, cultivated field edge; railroad ballast.

Croton monauthosynus Michx. Prairie Tea. Common, waste ground habitats. Euphorbia corollata L. Flowering Spurge. Common, nailroad prairie strip. *Euphorbia dentata Michx. Wild Poinsettia. Frequent, waste ground sites. Euphorbia maculata L. Nodding Spurge. Common, railway ballast; fields. Euphorbia supina Raf. Milk Spurge. Infrequent, roadsides; railroad ballast. Tragia betonicifolia Nutt. Noseburn. Rare, moist woodland thicket by tracks.

FAGACEAE

Quercus alba L. White Oak. Common, canopy of oak-hickory woodland. Quercus marilandica Muenchh. Blackjack Oak. Common, oak woods; fence rows. Quercus stellata Wang. Post Oak. Common, canopy of oak woods; fence rows. Quercus velutina Lam. Black Oak. Common, canpy of oak woods; fence rows.

GENTIANACEAE

Gentiana puberulenta Pringle. Downy Gentian. Rare, railroad prairie strip. Sabatia angularis (L.) Pursh. Rose Pink. Infrequent, roadside.

GERANIACEAE

*Brodium cicutarium (L.) L' Her. Storksbill. Infrequent, waste ground N. Geranium carolinianum L. Cranesbill. Common, disturbed waste ground. Geranium maculatum L. Wild Geranium. Frequent, shaded oak woodland edges.

GRAMINEAE

- *Aegilops cylindrica Host. Jointed Goatgrass. Rare, railroad waste ground. N. *Agropyron repens (L.) Beauv. Quackgrass. Rare, cultivated field edges. N.
- *** Agrostis hyemalis (Walt.) BSP. Ticklegrass. Frequent, waste ground areas.
 **Agrostis stolonifera L. Redtop. Common, sedge-grass meadow; pastures. I.
- Andropogon gerardii Vitman. Big Bluestem. Common, railroad prairie strip.
 Andropogon virginicus L. Broomsedge. Common, pastures; fields; prairie strip.
- **Aristida dichotoma Michx. Povertygrass. Infrequent, railroad right-of-way.
- * * Aristida longespica Poir. Three-awn Grass. Rare, railway ballast.
- *Aristida oligantha Michx. Prairie Three-awn. Frequent, disturbed waste ground.
- ** Avena sativa L. Oats. Rare, cultivated fields; railway ballast. I.
- *Bromus commutatus Schrad. Hairy Chess. Common, waste ground habitats. N.
- ***Bromus japonicus Thumb. Japanese Chess. Common, railroad right-of-way. N. ***Bromus tectorum L. Downy Chess. Common, waste ground habitats; fields. N.
- Cenchrus Iongispinus (Hack.) Fern. Sandbur. Rare, cultivated field edges.

 Cinna arundinacea L. Wood Reed. Common, sedge-grass wet meadow; lake margin.
- ***Dactylis glomerata L. Orchard Grass, Common, fields; open pastures. I. Danthonia spicata (L.) Beauv. Poverty Oatgrass. Frequent, open woods.
- **Digitaria ischaemum (Schreb.) Muhl. Smooth Crabgrass. Frequent, waste ground.
- N.
 ***Digitaria sanguinalis (L.) Scop. Hairy Crabgrass. Common, open waste ground.
- N.
 ***Echinochloa crusgalli (L.) Beauv. Barnyard Grass. Frequent, moist waste ground.
 - Eleusine indica (L.) Gaertn. Goose Grass. Infrequent, roadsides of tracks. N.
- **Elymus canadensis L. Canada Wild Ryc. Frequent, railroad prairie strip.

 Elymus virginicus L. Virginia Wild Rye. Frequent, sedge-grass meadow.
- *Eragrostis cilianensis (All.) Mosher. Stinkgrass. Rare, cultivated fields. N. Eragrostis spectabilis (Pursh) Steud. Purple Lovegrass. Common, prairie strip. Festuca obtusa Biehler. Nodding Fessuc. Rare, moist shaded woodland.
- *Festuca pratensis Huds. Meadow Fescue. Common, fields; roadsides. I.
- Glyceria striata (Lam.) Hitchc. Foul Manna Grass. Infrequent, sedge meadow.
- ***Hordeum pusillum Nutt. Little Barley. Common, waste ground; roadsides.
 **Hordeum vulgare L. Barley. Rare, cultivated field edges; railroad ballast. I.
- **Koeleria pyramidata (Lam.) Beauv. Junegrass. Infrequent, prairie strip.
- *Leersia oryzoides (L.) Sw. Rice Cutgrass. Common, wet sedge-grass meadow. Leptochloa filiformis (Lam.) Beauv. Red Sprangletop. Rare, cultivated field.
- *Lolium perenne L. Perennial Ryegrass. Infrequent, roadside waste ground. I. Mublenbergia schreberi J.F. Gmel. Nimblewill Mubly. Infrequent, roadsides. Panicum anceps Michx. Infrequent, wet sedge-grass meadow.
 - *Panicum capillare L. Witchgrass. Common. disturbed open ground.
- *Panicum clandestinum L. Broad-leaved Panicum. Rare. woodland border,
- **Panicum dichotoniflorum Mich. Fall Panicum. Common, railroad waste ground.

 Panicum lanuginosum Ell. Panic Grass. Common, sedge-meadow; prairie swales.
- Panicum linearifolium Scribn. Panic Grass. Infrequent, open cherty woods. Panicum lindheimeri Nash. Panic Grass. Common, sedge meadow; prairie swales.
- Panicum oligosanthes Schultes var. scribnerianum (Nash) Fern. Panic Grass. Frequent, railroad prairie strip.
- Panicum rigidulum Bosc. Munro Grass. Common, prairie swale; sedge meadow. Panicum virgatum L. Switchgrass. Frequent, wet sedge-grass meadow. Paspalum laeve Michx. Lens Grass. Common, lake margin; paririe swales.
- **Paspalum pubisforum Poir. var. glabrum Vasey. Beadgrass. Infrequent, moist waste ground; roadsides.

- * * * Phalaris arundinacea L. Reed Canary Grass. Common, wet sedge-grass meadow. Phleum prateuse L. Timothy. Frequent, pastures; cultivated fields. I. Poa annua L. Annual Bluegrass. Rare, waste ground site. N.
- **Poa pratensis L. Kentucky Bluegrass. Common. prairie strip; pastures. I.
- **Schizachyrium scoparium (Michx.) Nash. Little Bluestem. Common, prairie strip. *Secale cereale L. Rye. Infrequent, roadsides; railroad ballast. I.
- * * * Setaria faberii Herrm. Giant Foxtail. Common, open waste ground. N.
- * * * Setaria glauca (L.) Beauv. Yellow Foxtail. Common, waste ground. N. *Setaria viridis (L.) Beauv. Green Foxtail. Infrequent, railroad ballast. N. Sorehastrum avenaceaum (Michx.) Nash, Indian Grass, Common, prairie strip.
 - * * Sorghum bicolor (L.) Moench. Sorghum. Rare, cultivated fields; right-of-way. I.
 - *Sorghum halepense (L.) Pers. Johnson Grass. Common, sedge meadow; fields. I. * * Spartina pectinata Link. Prairie Cordgrass. Frequent, sedge-grass meadow.
 - **Sporobolus vaginiflorus (Torr.) Wood. Poverty Dropseed. Rare, pastures.
- Tridens flavus (L.) Hitche, Purpletop, Common, prairie strip; roadsides. *Tripsacum dactyloides L. Eastern Gamagrass. Infrequent, sedge meadow.
- * * * Triticum aestivum L. Wheat. Rare, cultivated fields; railway ballast. I. Vulpia octoflora (Walt.) Rydb. Six-weeks Fescue. Frequent, pastures; woods.
- * * Zea mays L. Corn. Rare, railway ballast. I.

HALORAGIDACEAE

*Prosperpinaca palustris L. Mermaid Weed. Rare, sink-hole pond; lake spillway.

HYPERICACEAE

**Hypericum drummondii (Grev. & Hook.) T. & G. Nits-and-lice. Rare, prairie

Hypericum gentianoides (L.) BSP. Pineweed. Rare, railroad prairie strip. Hypericum mutilum L. Dwarf St. Johns-wort. Frequent, muddy lake margin. Hypericum perforatum L. Common St. Johns-wort. Frequent, prairie trip. N. Hypericum punctatum Lam. Spotted St. Johns-wort. Frequent, prairie strip.

IRIDACEAE

Sisyrinchium angustifolium Mill. Blue-eyed Grass. Rare, cherty woodland. * * Sisvrinchium cambestre Bickn. Prairie Blue-eved Grass. Common, railroad prairie.

JUGLANDACEAE

Carya orata (Mill.) K. Koch. Shagbark Hickory. Common, canopy of oak woods. Carya texana Buckl. Black Hickory. Frequent, canopy of oak-hickory woodland. Carya tomentosa Nutt. Mockernut Hickory. Common, canopy of oak woodland. Juglans nigra L. Black Walnut. Infrequent, open pasture lands.

IUNCACEAE

- ** Luneus acuminatus Michx, Sharp-pointed Rush, Frequent, sedge meadow; swales, Juneus brachycarpus Engelm. Short-fruited Rush. Common, sedge meadow; swales. Juneus dudleyi Wieg. Dudley's Rush. Rare, roadside ditches; sedge meadow.
- *** Juneus interior Wieg. Inland Rush. Common, sedge meadow; lake border.
- ** Junicus nodatus Coville. Rush. Infrequent, prairie swale; wet depressions. Juneus tenuis Willd. Slender Rush. Common, roadsides; field edges. Luzula bulbosa (Wood) Rydb. Wood Rush. Frequent, cherty open woodland.

LABIATAE

Cunila origanoides (L.) Britt. Stone Mint. Infrequent, cherty oak woods. Hedeoma bispida Pursh. Mock Pennyroyal. Rare, railroad prairie strip. Isanthus brachiatus (L.) BSP. False Pennyroyal. Rare, moist lake margin.

- ***Lamium amplexicaule L. Henbit. Frequent, open ground; roadsides. N.
- ***Lamium purpureum L. Dead Nettle. Infrequent, roadside embankments. N.
- ***Lycopus rubellus Moench. Water Horehound. Common, lake margin; sink-holes.
 ***Lycopus virginicus L. Virginia Bugleweed. Infrequent, sedge-grass meadow.
- Monarda fistulosa L. Wild Bergamot. Frequent, woodland edges; prairie strip. Perilla frutescens (L.) Britt. Beefsteak Plant. Rare, moist embarkment. N. Pbysostegia virginiama (L.) Benth. False Dragonhead. Rare, shaded thicket.
 - *Prunella vulgaris L. var. lanceolata (Bart.) Fern. Self-Heal. Common, field edges; pastures; right-of-way; lake border.
 - Pycnanthemum tenuifolium Schrad. Slender Mountain Mint. Frequent, prairie strip; woodland border.
- Seutellaria lateriflora L. Mad-dog Skullcap. Infrequent, muddy lake margin.
 **Seutellaria orata Hill. Heart-leaved Skullcap. Rare, cherty oak woodland.
 Seutellaria parutal Michx. Small Skullcap. Infrequent, open praitie strip.
- Teucrium canadense L. Wood Sage. Common, woodland edges; prairie strip.

LAURACEAE

Sassafras albidum (Nutt.) Nees. Sassafras. Common, subcanopy of oak woodland; fence row thickets.

LEGUMINOSAE

- Amorpha canescens Pursh. Lead Plant. Rare, railroad prairie strip; fence row. Apios americana Medic. Ground Nut. Common, wet sedge-grass thickers.
- **Baptisia leucantha T. & G. White Wild Indigo. Frequent, railroad prairie.
- *Baptisia leucophaea Nutt. Long-bracted Wild Indigo. Frequent, prairie strip. Cassia fasciculata Michx. Partridge Pea. Common, disturbed right-of-way.
 - Cassia nictitans L. Sensitive Pea. Infrequent, cherty open woods.

 Cercis canadensis L. Red Bud. Infrequent, subcanopy of oak-hickory woods.
- *Crotalaria sagittalis L. Rattlepod. Common, railroad prairie strip.
- *Desmanthus illinoensis (Michx.) MacM. ex Robins. & Fern. Illinois Mimosa. Rare, prairie strip.
- Desmodium ciliare (Muhl.) DC. Hairy Tick Trefoil. Frequent, prairie strip. *Desmodium illinoense Gray. Illinois Tick Trefoil. Frequent, prairie strip.
- Desmodium marilandicum (L.) DC. Small-leaf Tick Trefoil. Rare, oak woods.

 Desmodium panicalatum (L.) DC. Panicled Tick Trefoil. Common, prairie strip.

 Desmodium returnificium DC. Round leaf Tick Trefoil. Lefterment.
- Desmodium rotundifolium DC. Round-leaf Tick Trefoil. Infrequent, open woods. Desmodium sessilifolium (Tort.) T. & G. Sessile-leaf Tick Trefoil. Frequent, railroad right-of-way strip.
- Gleditia triacanthos L. Honey Locust. Infrequent, open oak woods; pastures. Lespedeza capitata Michx. Round-headed Bush Clover. Frequent, prairie strip. ***Lespedeza cuneata (Dumont) G. Don. Sericea Lespedeza. Common, waste ground.
- I.

 Lespedeza procumbens Michx. Trailing Lespedeza. Infrequent, open woodland.
- ***Lespedeza stripulacea Maxim. Korean Lespedeza. Frequent, waste ground. I. Lespedeza striata (Thunh.) H. & A. Japanese Lespedeza. Rare, roadsides. I. Lespedeza violacea (L.) Pers. Violet Prairie Clover. Frequent, railroad prairie. Lespedeza virginica (L.) Britt. Slender Bush Clover. Common, railroad prairie.
- Medicago lupulina I. Black Medic. Infrequent, roadside waste ground. N.
 **Medicago sativa L. Alfalfa. Frequent, pastures; roadsides; field edges. I.
 Melilotus albus Desr. White Sweet Clover. Common. roadsides: pastures. I.
 - Melilotus officinalis (L.) Lam. Yellow Sweet Clover. Frequent, waste ground. I.

 Petalostemum candidum (Willd.) Michx. White Prairie Clover. Rare, prairie strip.

 Petalostemum purpureum (Vent.) Rydb. Purple Prairie Clover. Rare, prairie strip.

Psoralea psoralioides (Walt.) Cory. var. eglandulosa (Ell.) Freeman. Sampson's Snakeroot. Common, railroad prairie strip.

Schrankia uncinata Willd. Sensitive Brier. Frequent, railroad prairie strip; open woodland.

Strophostyles helvola (L.) Ell. Wild Bean. Rare, fence thicket; roadside.

Stylosanthes biflora (L.) BSP. Pencil Flower. Common, open woods; prairie strip. Tephrosia virginiana (L.) Pers. Goat's Rue. Frequent, open woods; prairie strip.

*Trifolium campestre Schreb. Large Hop Clover. Common, waste ground. N. *Trifolium pratense L. Red Clover. Frequent, fields; roadsides. N.

*Trifolium reflexum L. Buffalo Clover. Rare, roadsides. N.

Trifolium repens L. White Clover. Common, disturbed waste places. N. Vicia dasycarpa Tenore. Hairy-fruited Vetch. Infrequent, railroad ballast. N.

LILIACEAE

Allium canadense L. Wild Onion. Frequent, pastures; railroad prairie strip. * Allium sativum L. Garlic. Rare, railway ballast edge. 1.

Allium vineale L. Field Garlic. Infrequent, roadsides; pasture fields. N. * * * Asparaeus officinalis L. Garden Asparagus. Infrequent, field edges. 1.

*Camassia scilloides (Raf.) Cory. Wild Hyacinth. Infrequent, prairie strip. Erythronium albidum Nutt. White Trout Lily. Infrequent, cherty oak woods.

* * Melanthium virginicum L. Bunch Flower. Rare, wet sedge-grass meadow edge. Nothoscordum bivalve (L.) Britton. False Garlic. Common, prairie strip; fields; woodland edge.

Polygonatum biflorum (Walt.) Ell. Solomon's Seal. Infrequent, shady oak woods. Smilacina racemosa (L.) Desf. False Solomon's Seal. Frequent, moist oak woods. Smilax bona-nox L. Catbrier. Infrequent, open woods; fence rows; roadside. Smilax bispida Muhl. Bristly Greenbrier. Infrequent, shaded oak woodland.

LINACEAE

Linum sulcatum Riddell. Yellow Flax. Rare, railroad prairie strip.

LOASACEAE

** * Menzelia oligosperma Nutt. Stick-leaf. Frequent, railroad ballast.

LYTHR ACEAE

Cubbea petiolata (L.) Kochne. Clammy Cuphea. Frequent, open waste ground. Rotala ramosior (L.) Koehne. Toothcup. Infrequent, muddy lake margin.

MALVACEAE

Abutilon theophrasti Medic. Velvetleaf. Infrequent, railroad ballast; fields. N. * Althaea rosea L. Hollyhock. Rare, railroad ballast. I.

Callirhoe digitata Nutt. Poppy Mallow. Rare, open cherty woods.

*Hibiscus lasiocarpos Cav. Woolly Rose Mallow. Common, lake margin; sedge meadow.

* * Sida spinosa L. Prickly Mallow. Infrequent, cultivated field edges. N.

MORACEAE

**Morus alba L. White Mulberry. Rare, cultivated field edge; oak woods. I.

NYCTAGINACEAE

***Mirabilis nyctaginea (Michx.) MacM. Four O'Clock. Common, railroad ballast.

NYMPHACEAE

**Nelumbo lutea (Willd.) Pers. American Lotus. Common, emergent in lake.

NYSSACEAE

*Nyssa sylvatica Marsh. Sour Gum. Infrequent, subcanopy of oak-hickory woods.

OLEACEAE

Fraxinus americana L. White Ash. Infrequent, oak-hickory woodland.

ONAGRACEAE

Gaura biennis L. Biennial Gaura. Infrequent, railroad prairie strip.

- **Ludwigia alternifolia L. Seedbox. Common, lake margin; sink-hole pond border. Ludwigia palustris (L.) Ell. var. americana (DC.) Fern. Marsh Purslane. Common, muddy lake margin; sink-hole pond.
- *Oenothera biennis L. Common Evening Primrose. Common, moist waste ground.
- ***Oenothera laciniata Hill. Ragged Evening Primrose. Infrequent, waste ground.

OPHIOGLOSSACEAE

Botrychium virginianum (L.) Sw. Rattlesnake Fern. Infrequent, moist oak woodland; sink-hole pond embankment.

ORCHIDACEAE

*Spirantbes cernua (L.) Richard. Nodding Ladies Tresses. Rare, prairie strip. *Spirantbes gracilis (Bigel.) Beck. Green-lipped Ladies Tresses. Rare, railroad prairie strip.

OXALIDACEAE

Oxalis dillenii Jacq. Yellow Wood Sorrel. Frequent, waste ground.
 Oxalis violacea L. Violet Wood Sorrel. Frequent, open woods; railroad prairie.

PASSIFLORACEAE

Passiflora lutea L. var. glabriflora Fern. Passion Flower. Rare, shaded woods.

PHYTOLACCACEAE

Phytolacca americana L. Pokeweed. Common, disturbed open ground.

PLANTAGINACEAE

Plantago aristata Michx, Bracted Plantain. Frequent, open disturbed areas.

Plantago lanceolata L. English Plantain. Infrequent, waste ground; roadsides. N.

**** Plantago ragelii Done. Rugel's Plantain. Frequent, roadside; woods border. Plantago pusilla Nutt. Small Plantain. Rare, railroad prairie strip. Plantago virginica L. Hoasy Plantain. Infrequent, railroad prairie strip.

POLEMONIACEAE

Phlox pilosa L. Prairie Phlox. Infrequent, railroad prairie strip.

POLYGALACEAE

*Polygala incarnata L. Pink Milkwort. Rare, railroad prairie strip.

*Polygala sanguinea L. Field Milkwort. Common, railroad prairie strip.
 Polygala senega L. Seneca Snakeroot. Rare, moist shaded woodland by lake.

POLYGONACEAE

**Persicaria coccinea (Muhl.) Greene. Water Smartweed. Common, emergent in sink-hole pond; Cedar Gap Lake.

Persicaria bydropiperoides (Michx.) Small. Mild Water Pepper. Common, lake margin; prairie swales; sedge-grass meadow.

Persicaria lapathifolia (L.) Small. Pale Smartweed. Frequent, lake margin. N.

Persicaria pensylvanica (I..) Small. Pinkweed. Common, lake margin; swales. Persicaria punctata (Ell.) Small. Smartweed. Rare, lake border by spillway.

**Polygonum aviculare L. Knotweed, Frequent, disturbed open waste ground, N. Polygonum scandens L. False Buckwheat. Frequent, wet sedge-grass meadow thickets.

Polygonum rirginianum L. Virginia Knotweed. Rare, moist shaded oak woods. Rumex acetosella L. Red Sheep Sorrel. Common, throughout waste ground. N. **Rumex crispus L. Sour Dock. Common, waste ground habitats. N.

POLYPODIACEAE

Asplenium platyneuron (L.) Oakes. Ebony Spleenwort. Rare, cherty embankment. Pteridium aquilinum (L.) Kuhn. Bracken Fern. Rare, cherty open woodland next to right-of-way.

PORTULACACEAE

Claytonia virginica L. Spring Beauty. Frequent, open woods; pastures.

POTAMOGETONACEAE

Potamogeton diversifolius Raf. Pondweed. Common, emergent of Cedar Gap Lake.

PRIMULACEAE

Dodecatbeon meadia L. Shooting Star. Infrequent, railroad prairie strip.
**Lysimachia hybrida Michx. Loosestrife. Rare, lake margin thicket.
Lysimachia lanceolata Walt. Loosestrife. Frequent, moist shaded woodland.

RANUNCULACEAE

Anemone virginiana L. Thimbleweed. Infrequent, cherty open woods.

Anemonella thalictroides (L.) Spach. Rue Anemone. Rare, cherty open woods.

*Delphinium ajacis L. Rocket Larkspur. Rare, roadside. I.

Delphinium carolinianum Walt, var. crispum Perry, Wild Blue Larkspur, Infrequent, railroad right-of-way.

*Delphinium tricorne Michx. Dwarf Larkspur. Rare, cherty moist woodland. Rannuculus abortieus L. Small-flowered Crowfoot. Common, waste ground. Rannuculus facicularis Muhl. var. apricus (Greene) Fern. Prairie Buttercup. Frequent, cherty oak woodland; prairie strip.

** Ranuneulus laxicaulis (T. & G.) Datby. Špearwort. Frequent, sedge meadow. Ranuneulus micrantbus Nutt. Small-flowered Buttercup. Rare, cultivated field.
*Thalictrum revolutum DC. Wasy Meadow-rue. Infrequent, ratiroad prairie.

RHAMNACEAE

Ceanothus americanus L. var. pitcheri T. & G. New Jersey Tea. Frequent, railroad prairie strip; open woods.

ROSACEAE

Agrimonia parviflora Ait. Swamp Agrimonia. Rare, sedge-grass meadow edge. Amelanchier arborea (Michx. f.) Fern. Shadbush. Infrequent, oak-hickory woods. Crataegus erusgalli L. Cockspur Hawthorn. Rare, fence row thicket. Fragaria virginiana Duchesne. Wild Strawberry. Common, prairie strip; woods. Geum canadense Jacq. var. camporum (Rydb.) Fern. White Avens. Infrequent, moist shaded woods near lake.

Gillenia stipulata (Muhl.) Trel. Indian Physic. Infrequent, cherty woodland.

**Potentilla norregica L. Rough Cinquefoil, Rare, spillway ditch. N. Potentilla recta L. Sulfur Cinquefoil. Common, disturbed ground habitats. N. Potentilla simplex Michx. Old-field Cinquefoil. Common, oak woodland; railroad prairie strip.

**Prunus bortulana Bailey. Hortulan Plum. Rare, fence row border. I.

**Prunus mahaleh L. Mahaleh Cherry. Rare, oak woodland border. I. Prunus munsoniana Wight & Hedrick. Wild Goose Plum. Rare, fence rows.

Prunus munsoniana Wight & Hedrick. Wild Goose Plum. Rare, fence rows.

*Prunus persica (L.) Batsch. Peach. Rare, remnant from old orchard. I.

**Prunus serotina Ehrh. Wild Black Cherry. Infrequent, subcanopy of oak woods.

*Pyrus ioensis (Wood) Bailey. Wild Crab Apple. Rare, pasture field edge.

**Pyrus malus L. Apple. Infrequent, old orchard remnants in woods. I. Rosa carolina L. Pasture Rose. Frequent, pastures; prairie strip; woods. Rosa multiflora Thunb. Multiflora Rose. Infrequent, fence row thickets. I. Rosa setigera Michx. Prairie Rose. Infrequent, pastures; prairie strip.

*Rubus flagellaris Willd. Northern Dewberry. Common, fence rows; prairie strip;

woodland thickets.

Rubus occidentalis L. Black Raspberry. Rare, mesic shaded woodland thickets.
**Rubus pensylvanicus Poir. Highbush Blackberry. Common, pastures; fields; railroad prairie strip; roadsides; sedge thickets.

RUBIACEAE

Cephalanthus occidentalis L. Buttonbush. Common, lake margin; sink-hole pond. Diodia teres Walt. Rough Buttonweed. Common, waste ground habitats. Galium aparine L. Cleavers. Frequent, mesic oak woods; sedge meadow.

** Galium obtusum Bigel. Blunt-leaf Bedstraw. Rare, shaded oak woods.

** Galium tinctorium L. Stiff Bedstraw. Frequent, sink-hole pond border.

**Galium virgatum Nutt. Dwarf Bedstraw. Rare, railroad prairie strip. Hedyotis crassifolia Raf. Small Bluets. Common, pastures; prairie strip. Hedyotis longifolia (Gaertn.) Fosb. Long-leaved Bluets. Infrequent, railroad prairie strip.

Hedyotis nigricans (Lam.) Fosb, Narrow-leaved Bluets. Rare, cherty woods.

SALICACEAE

Salix caroliniam Michx, Ward's Willow, Frequent, lake margin, Salix bamilis Marsh, Prairie Willow, Infrequent, prairie strip; field edge. **Salix nigra Marsh, Black Willow, Common, lake margin; sink-hole pond.

SANTALACEAE

Comandra richardsiana Fern. False Toadflax. Common, railroad prairie strip.

SAXIFRAGACEAE

*Heuchera richardsonii R. Br. Prairie Alumroot. Rare, railroad prairie.

*Penthorum sedoides L. Ditch Stonecrop. Common, lake margin; sedge meadow. Ribes missouriense Nutt. Missouri Gooseberry. Frequent, oak woods; fence rows.

SCROPHULARIACEAE

*** Agalinus tenuifolia (Vahl.) Raf. Slender False Foxglove. Frequent, lake margin.
**Lindernia dubia (L.) Pennell. False Pimpernal. Infrequent, muddy lake margin.

Mimulus ringens L. Monkey Flower. Frequent, sedge-grass meadow zone. Pedisularis canadensis L. Lousewort. Infrequent, open cherty woodland. Penstemon pallidus Small. Pale Beard-tongue. Frequent, railroad prairie. Penstemon tubaelforus Nutt. Beard-tongue. Infrequent, railroad prairie. Scroobhalaria marilandica L. Later Figwort. Common, lake border; sedge meadow.

*Verbascum blattaria L. Moth Mullein. Rare, raitroad ballast; roadside. N. Verbascum thapsus L. Common Mullein. Infrequent, waste ground habitats. N. Veronica arvensis L. Corn Speedwell. Frequent, disturbed open ground. N.

**Veronica peregrina L. Purslane Speedwell. Infrequent, waste ground sites.

Veronicastrum virginicum (L.) Farw. Culver's Root. Rare, railroad prairie.

SOLANACEAE

Datura stramonium L. var. tatula (L.) Torr. Jimson Weed. Infrequent, railway ballast; cultivated fields.

Physalis heterophylla Necs. Clammy Ground Cherry. Rare, railroad ballast. Physalis subglabrata Mack. & Bush. Smooth Physalis. Frequent, waste ground.

*Solanum americanum Mill. Black Nightshade. Rare, cultivated fields.
 Solanum carolinense L. Horse Nettle. Common, pastures; roadsides; fields.

TYPHACEAE

Typha latifolia L. Cat-tail. Common, lake margin; prairie swales; ditches.

ULMACEAE

**Celsis occidentalis L. Hackberry. Infrequent, oak woods; sink-hole pond border. Ulmus alata Michx. Winged Elm. Infrequent, open oak-hickory woods. Ulmus americana L. American Elm. Infrequent, oak woods; pasture edges. Ulmus rubra L. Slippery Elm. Common, oak woodland; fence rows; pastures.

UMBELLIFERAE

Angelica renenosa (Greenway) Fern. Wood Angelica. Rare, prairie swale.

**Mocorphyllum procumbens (L.) Crantz. Wild Chervil. Common, waste ground. Cicuta maculata L. Water Hemlock. Common, lake margin; sedge-grass meadow. Daucus carota L. Wild Carrot. Common, roadsides; pastures; prairie strip. N. Eryngium yuccifolium Michx. Rattlesnake Master. Rare, railroad prairie strip. **Pastimaca sativa L. Wild Parsnip. Rare, railway ballast. N.

Polytaenia nuttallii DC. Prairie Parsley. Infrequent, railroad prairie.

**Sanicula canadensis L. Black Snakeroot. Infrequent, shaded cherty woods. Torilis japonica (Houtt.) DC. Hedge Parsley. Common, waste ground sites. N. Zizia aurea (L.) Koth. Golden Alexanders. Rare, wet sedge-grass meadow.

URTICACEAE

Boemeria cylindrica (L.) Sw. False Nettle. Infrequent, damp sedge meadow. Pilea pumila (L.) Gray. Clearweed. Infrequent, shaded mesic lake border.

VALERIANACEAE

Valerianella radiata (L.) Dufr. Corn Salad. Common, waste ground habitats.

VERBENACEAE

Phyla lanceolata (Michx.) Greene. Frog.Fruit. Infrequent, lake margin.

*Verbena bracteata Lag. & Rodr. Prostrate Vervain. Rare, roadside to lake.

Verbena canadensis L. Rose Vervain. Infrequent, railroad prairie strip.

Verbena bastata L. Blue Vervain. Frequent, wet sedge-grass meadow.

Verbena simplex Lehm. Narrow-leaved Vervain. Frequent, waste ground areas.

Verbena stricta Vent. Hoary Vervain. Infrequent, pastures; roadsides.

Verbena urticifolia L. White Vervain. Common, lake margin; sedge meadow.

VIOLACEAE

**Viola missouriensis Greene. Missouri Violet. Rare, cherty woodland. Viola pedata L. Bird-foot Violet. Frequent, railroad prairie; oak woods. Viola pratincola Greene. Common Blue Violet. Frequent, fields; oak woods. Viola rafinesquii Greene. Field Pansy. Common, prairie strip; pastures. N. *Viola sagittata Ait. Arrow-leaved Violet. Infrequent, railroad prairie.

VITACEAE

* * * Parthenocissus quinquefolia (L.) Planch, Virginia Creeper, Infrequent, oakhickory woodland.

Vitis aestivalis Michx. Summer Grape. Infrequent, oak-hickory woodland.

Vitis cinerea Engelm. Grayback Grape. Frequent, oak-hickory woods; thickets. Vitis vulpina L. Frost Grape. Infrequent, oak woodland thickets by lake.

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